



BATTERIES WITH ELECTROACTIVE NANOPARTICLES Abstract of the Disclosure

Batteries based on nanoparticles are demonstrated that achieve high energy densities. Vanadium oxide nanoparticles can have several different stoichiometries and corresponding crystal lattices. The nanoparticles preferably have average diameters less than about 500 nm and more preferably less than about 150 nm. Cathodes produced using the vanadium oxide nanoparticles and a binder can be used to construct lithium batteries or lithium ion batteries. The nanoparticles may have energy densities greater than about 900 Wh/kg.